

CLAIMS

1. Indicator lamp for a motor vehicle comprising a plurality of light sources (10) and optical processing means (16, 18, 20) able to straighten out the light emitted by the light sources (10) so that it is propagated in a direction essentially parallel to a general direction of emission (X), the optical processing means (16, 18, 20) comprising, in association with each source (10), a first element (12, 16, 18) able to distribute the light in a plane (YZ) essentially perpendicular to the general direction of emission (X), in an essentially uniform way onto a second, generally plate-shaped, element (14, 20) able to straighten out the incident light towards the said general direction of emission (X), characterised in that linking elements (22, 24) are arranged between first adjacent elements (12) and between the first elements (12) and the second element (14), and in that the first element (12), the second element (14) and the linking elements (22, 24) are made together of the same material and form a one-piece optical structure.

2. Indicator lamp according to Claim 1, characterised in that the optical structure further includes, between the linking elements (22) and the second elements (14), junction elements (28) which are of a single piece with them.

3. Indicator lamp according to Claim 1, characterised in that the second, plate-shaped, element (14) includes a stiffening rib (26) all along one of its longitudinal edges.

4. Indicator lamp according to Claim 1, characterised in that the optical structure includes, between the second element (14) and the first elements (12) or the linking elements (22, 24), a continuous plateau (32) which is of a single piece with these elements (12, 14, 22, 24).

5. Indicator lamp according to Claim 1, characterised in that the optical structure includes elements (34) for fixing a printed circuit (36).

6. Indicator lamp according to Claim 5, characterised in that the printed circuit (36) carries the light sources (10)

7. Indicator lamp according to Claim 6, characterised in that the light sources (10) are light-emitting diodes.

8. Indicator lamp according to Claim 7, characterised in that the light sources are essentially aligned.

9. Indicator lamp according to Claim 5, characterised in that the optical structure includes means (40, 44) for retaining a connector (42) associated with the printed circuit (36), these retaining means being of a single piece with the optical structure.

10. Indicator lamp according to Claim 1, characterised in that the optical structure includes means (46) for fixing into a housing, which are of a single piece with the optical structure.

11. Indicator lamp according to Claim 1, characterised in that the first element (12, 16, 18) distributes the light onto the second element, taking account of the variations ($k_3(\theta)$) in the transmission coefficients of the first (12) and second (14) elements, and of the emission-pattern curve ($k_2(\theta)$) of the light source (10), in order to obtain an illumination at the exit from the second element (14) which corresponds to a predetermined law ($k_1(\theta)$).